The Effect of Cooperative Integrated Reading and Composition (CIRC) on Students' Reading Achievement

ABSTRACT

The research is concerned with teaching reading comprehension through Cooperative Integrated Reading and Composition (CIRC). It is hoped that the result of the study will be useful, and can give the reader a clear insight on applying Cooperative Integrated Reading and Composition. The result of the study is expected to be useful theoretically and practically.

The design of this research was quasi-experimental design using two groups. One of the groups was treated as the experimental group and the other was treated as the controlled group. Experimental group did the pre-test, received the treatment with CIRC, and do the post-test. Meanwhile, controlled group did pre-test and post-test without treatment of CIRC. this research applied purposive sampling in determining the sample. The sample was taken 20-25% of the population by considering number of population which was small enough. The researcher purposively chose some students who were categorized in minimum and maximum score of the teaching criteria of completeness as in CIRC. The instruments of this research were reading test and questionnaire of interests.

The result of this research showed that After calculating the students' score of the two classes before treatment (pre test) the researcher found that T-value values was 0.808 by probability sig (2 tailed) was 0.423 or the probability was greater than 0.05 as the level of significance for two tailed test, and the of freedom (df) 53 , so (0.423>0.05) .Furthermore, if the probability was greater than 0.05 it means that there is no a significant difference between the experimental class and control class or in other words, both of them were the same relative ability before treatment. The data of pretest indicated that the statistical hypothesis of H0 is accepted and statistical of H1 is rejected.

Keywords: Cooperative Integrated Reading and Composition (CIRC), Reading Achievement and Students' Interest.

A. INTRODUCTION

The reading comprehension process is about understanding the opinions or messages that the author wants to deliver intentionally(May & Rizzarrdi, 2002). Reading comprehension skills are those that individuals can not only use in their academic life, but also their whole life. Besides, these are the skills that they can use in all courses, not only the course related to their mother tongue. Moreover, their achievement in reading comprehension forms the base for their success in other courses. Research has revealed that reading comprehension is directly related to the achievement in science (O'Reilly & Mcnamara, 2007) and mathematics (Maria, Tuohimaa, Aunola, & Nurmi, 2008; Walker, Zhang, & Surber, 2008). Particularly, In Indonesian context, reading is one of the compulsory tests in national examination and university entrance test which in some cases becomes a frustrating test for students. Therefore, in an attempt to teach reading comprehension skills that are regarded as having great importance, educators, and teachers can use different strategies, methods, techniques, and tools in reading comprehension activities.

In reality, do students fully understand what they are reading? Are they able to express verbally or in written communication what they have read? As explained previously that reading comprehension is one of life skills that can affect the students' academic life, professional teachers need to guide the students to be an independent reader. To pursue this, strategy that is a general pattern of a series of activities must be performed to achieve a certain goal. Learning strategies are also said to be a general pattern that contains a set of activities that can be used as guidelines (general instructions) in which competence as learning objectives can be achieved optimally.Kenyon (2008)states that when teachers plan reading sessions with your learners, make sure that there is time to talk about the text (passage, story and to write). Thus, the readers can explain what they have read from the story or passage and they can write some messages and explore their ideas in reading.

Ideally, if the teacher used different strategies in teaching, the students' comprehension will improve especially in reading comprehension of narrative text. However, in reality, though a lack of reading strategy knowledge accounts, largely, for EFL students' poor reading ability, instruction to train the students to be aware of and effectively use-reading strategies rarely happens during big English reading classes in most high schools. Furthermore, it seems that teachers of English assume that their students know reading strategies and thus can use them to read English text effectively. Therefore, the teachers just assign the reading materials, have the students read, and then assess their reading comprehension performance. The poor teaching method like this can lead to students' failure in reading comprehension. As stated by Ekwall & Shanker (1988), more than 90 percent of learners' reading failures could or should be blamed on poor teaching. This is in line with the observational studies byDurkin (1978-1979)and Pressley & Wharton-McDonald(1997) which found that teachers regularly assigned reading tasks to their students and then tested their reading comprehension, but rarely taught the reading strategies needed by their students.

As mentioned previously that in teaching reading, a teacher needs to apply at least one strategy to achieve the goals set up in the beginning of the teaching and learning process. Developed by Stevens, Madden, Slavin, & Farnish (1987), Cooperative Integrated Reading and Composition (CIRC) was designed to teach writing and reading in the upper and middle grades. In CIRC, students are assigned to teams composed of pairs of students from different reading groups. While the teacher is working with one reading group, students in the other groups are working in their pairs on a series of cognitively engaging activities, including reading to one another, making predictions about how stories will come out, summarizing stories to one another, writing responses to stories, and practicing spelling, decoding, and vocabulary. If the reading class is not divided into homogeneous reading groups, all students in the teams work with one another. Students work as a total team to master main idea and other comprehension skills (Slavin, 1996).

B. RESEARCH THEORY

Reading Comprehension

Definition of Reading Comprehension

Reading comprehension is an important skill. As we know, reading comprehension is more than a single skill. It involves the coordination of range of abilities and strategies. Harmer (2007) states that reading comprehension is useful for language acquisition. Reading definitely will improve people's knowledge because the more they read, the more they get knowledge. Reading also has a positive effect on the students' vocabulary knowledge, on their spelling or their writing. To comprehend a text, students have to be focused on what they read because reading is not only reading but also comprehending the text systematically. He also states that reading is incredibly active occupation. To doit successfully, the readers have to understand what words mean, see the pictures words are painting, understand the arguments, and work out if the readers agree with them. This statements show that without understanding the word; students cannot know what the meaning of the text is.

Grabe and Stoller (2002) stated that reading is the ability to draw meaning from printed and interpret this information appropriately. Reading is a complex behavior, which involves conscious and unconscious use of various strategies, including problems solving strategies, to build a model of the meaning, which the writer is assumed to have intended. The ideas expressing in this context reading is the process of interpreting meaning and information from presented materials in terms of using strategies to solve some problems. Heilmanin Zainuddin (2015) stated that reading is a product of interesting with the printed language that should be comprehended. This simple definition implies that reading is an activity to have the outcome of comprehending the meaning from the printed or written language.

Cooperative Integrated Reading and Composition

CIRC is one of the techniques offered within the Cooperative Learning method. In the development of CIRC, Stevens, Madden,Slavin, and Farnish(1987) at Johns Hopkins University focused simultaneously on curriculum and on instructional methods in an attempt to use cooperative learning as a vehicle for introducing state-of-the-art curricular practices derived primarily from basic research into the practical teaching of reading and writing.

For decades, CIRC has been found to be effective when used in teaching reading and writing (Durukan, 2011). Richardson and Morgan (2003) highlight that in CIRC teachers use basic reading texts and traditional reading groups but assign pairs of students from different reading groups to meet and work on specialized tasks. For instance, students in the pairs might read to each other, make predictions about reading, summarize stories, write responses to stories, work together on getting the main idea of the story, and often work together on vocabulary.

Principles of Cooperative Integrated Reading and Composition (CIRC)

The development of the CIRC model is proceeded from an analysis of the problems of traditional reading and writing/language arts instruction (Stevens, Madden, Slavin, &Farnish, 1987). The principal issues addressed in the development process are discussed in the following sections.

Cooperative Learning

The form of cooperative learning is applied in all techniques of cooperative learning developed by Slavin (1996). The following are the cycle of activities that underlies all of them.

- Teacher instruction. Initial instruction always come from the teachers. Instructions begin with the teacher presenting the new information or strategies through models and explanations. Students receive cognitive support during the initial phase of practice in the form of collaboration with their peers and teacher guidance and feedback.
- Team practice. Students are assigned in heterogeneous ability teams where they collaborate on structured follow-up activities. Cooperative activities are reinforced through group goals and recognition based on points that team members receive for their individual performance on all quizzes and compositions (Stevens & Slavin, 1995). In addition, students may work on items and check answers with each other, drill one another, reach and discuss common answers, and so on. Students also assess one another to make certain that teammates will succeed on individual assessments.
- Individual assessment. Students are individually assessed on their learning of the information or skills contained in the lesson.
- Team recognition. Students' scores on individual assessments are summed to form team scores. Teams who meet certain pre-established criteria may earn certificates or other rewards.

Follow-up

One major focus of the CIRC program reading activities is on making more effective use of follow-up time by having students work within cooperative teams on prescribed activities coordinated with reading group instruction and the basal stories. These activities related to objectives in such areas as reading comprehension, vocabulary, decoding, and spelling. Students are motivated to work with one another on these activities by the use of a cooperative reward structure in which students are able to earn certificates or other recognition based on the learning of all team members. Nonetheless, these follow-up activities, or unsupervised seatwork, indicates that they are often of poor quality, are rarely taken seriously by teachers or students, and are poorly integrated with other reading activities, and that student time on-task during follow-up periods is typically low. Yet, in a class with three reading groups, as much as two thirds of the reading period is spent on follow-up activities.

Oral Reading

Reading out loud is a standard part of most reading programs. Further, most oral reading takes place in reading groups, where one student reads while others wait, largely wasting the time of the group members other than the reader. One objective of the CIRC program is to greatly increase students' opportunities to read aloud and receive feedback on their reading by having students read to teammates and by training them in how to respond to one another's reading.

- Reading Comprehension Skill

Studies of good and poor readers have consistently found that poor readers lack comprehension strategies and metacognitive control of their reading, and that these strategic deficits play a large part in their comprehension problems. A major objective of CIRC is to use cooperative teams to help students learn broadly applicable reading comprehension skills. The students in CIRC also make and explain predictions about how problems will be resolved and summarize main elements of stories to one another, both of which are activities found to increase reading comprehension.

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RESEARCH METHOD

The design of this research was quasi-experimental design using two groups. One of the groups was treated as the experimental group and the other was treated as the controlled group. Experimental group did the pre-test, received the treatment with CIRC, and do the post-test. Meanwhile, controlled group did pre-test and post-test without treatment of CIRC.

Pre-test and Post Test

The pre-test was intended to find out the students' prior knowledge of reading before given the treatment, while the post-test was intended to find out the students' reading achievement after the treatment given. In this research the test was used to test the significant difference.

The design is presented in the following table:

Class	Pre-test	Treatment	Post-test
E	O1	X1	O2
C	O1	X2	O2

Where:
E = Experimental Class
C = Controlled Class
O1 = Pre-test
O2 = Post-test
X1 = Treatment by Cooperative Integrated Reading and Composition
X2 = Treatment by Conventional Method

(Gay, Mills, & Airasian, 2012)

The data collected in line with instruments were analyzed by using the following procedures:

Reading Test

Checking the students' answer

Analyzing the students' correct answer using the following formula:

$$The\ students' answer = \frac{Student's\ correct\ answer}{Maximum\ score}\ x\ 100$$

Calculating the mean score and standard deviation using SPSS program

Classifyingthe students' scores using the following scales:

Then the students' score was classified by using the following classification:

1) 96 to 100 was classified as *excellent*
2) 86 to 95 was classified as *very good*
3) 76 to 85 was classified as *good*
4) 66 to 75 was classified as *fairly good*
5) 56 to 65 was classified as *fair*
6) 36 to 55 was classified as *poor*
7) 00 to 35 was classified as *very poor*

(Depdiknas,2006:

Calculating the T-test value using independent sample t-test to find out the effectiveness of CIRC during the treatment and the difference between the pre-test and post-test of both groups with significance level 0.05, which was described below:

Having significant difference
H^1 :$\mu^1 > \mu^2$ or P-value $< \alpha$ 0.05
Having no significant difference
H^0 : $\mu^1 = \mu^2$ or P-value $\geq \alpha$ 0.05

Note:
H^1 : If Hypothesis is significantly different
H^0 : If Hypothesis is not significantly different
μ^1 : Mean Score of Pre-Test
μ^2 : Mean Score of Post-Test
α : Level of significance

Analyzing the students' interest (Questionnaire)

The questionnaire was given to the students by using Likert Scale. It aimed to find out the students' interest by responding to a series statement categorized as strongly agree (SA), agree (A), undecided (U), disagree (D), or strongly disagree (SD) with the statement given. Each response is associated with a point value and an individual's score was determined by summing the point values for each statement. The point's values were assigned to positive statement and negative statement. The data was analyzed as follows:

Likert Scale

Positive statement score	**Categories**	**Negative statement score**
5	Strongly Agree (SA)	1
4	Agree (A)	2
3	Undecided (U)	3
2	Disagree (D)	4
1	Strongly Disagree (SD)	5

Calculating the students' score using the following formula:

$$P = \frac{F}{N} x\ 100$$

Note:
P = Percentage
F = Frequency of the answer
N = Number of the students

(Hatch & Farhady, 1982)

Calculating the interval using the following formula:

$$Interval = \frac{The\ Highest\ Score - The\ Lowest\ Score}{Amount\ of\ Categories}$$

Classifying the students' score using the following scale:

No	Interval Score	Classification
1	85-100	Very High
2	69-84	High
3	52-68	Moderate
4	36-51	Low
5	0-35	Very Low

Note:
Very High = Very Interested
High = Interested
Moderate = Adequate
Low = Uninterested
Very Low = Very Uninterested

(Sugiyono, 2008)

Calculating the mean score of students' interest using SPSS program

RESULT

The findings of the research are the types of learning style preferences at the first year students and the different types of learning style between male and female students

The Improvement of Students' reading Comprehension Using Cooperative Cooperative Integrated Reading and Composition (CIRC)

The Percentage of Students' Reading Comprehension on the Pre-test

No	Score	Category	Control		Experimental	
			Frequency	%	Frequency	%
1	96-100	Excellent	0	0	0	0
2	86 - 95	Very good	0	0	0	0
3	76 – 85	Good	0	0	0	0
4	66 -75	Fairly good	0	0	0	0
5	56 -65	Fair	0	0	0	0
6	36 - 55	Poor	7	26	4	14.8
7	00 -35	Very Poor	20	74	24	88.9
Total			27	100	28	100

The table shows that the pretest of the control class was 20 (74%) student who was in very poor category and there were 7(26%) who was in poor category no student were in fair, fairly good, good, very good and excellent category. On the experimental class was 24 (88.9%) students were in very poor category,

4(14.8%) students were in poor category and no student were in fair, fairly good, good, very good and excellent category

The Percentage of Students' Reading Comprehension on the Posttest

The analysis shows that the means score of the students' Reading Comprehension after the treatment can be seen in the table below

No	Score	Category	Control		Experimental	
			Freq	%	Freq	%
1	96-100	Excellent	0	0	0	0
2	86 - 95	Very good	0	0	0	0
3	76 – 85	Good	7	26	4	14.3
4	66 -75	Fairly good	7	26	4	14.3
5	56-65	Fair	6	22.2	8	28.6
6	36-55	Poor	7	26	8	28.6
7	< 35	Very poor	0	0	4	14.3
Total			27		28	

The Table above shows that the result of post-test shows that the control class was 7 (26%) students who were in poor category, 6 (22.2%) students who were in fair category, 7 (26%) students who was in fairly good category,7 (26%) students who was in good category and no student were in very good and excellent category, while in the experimental class, there was 4 (14.3%) students who were in very poor category, 8 (28.6%) students who were in poor category, 8(28.6 %) students who were in fair category, 4 (14.3%) students who were in fairly good category,4 (14.3%) students who were in good category and no students were in very good, and excellent category.

The Means Score and Standard Deviation of Students' Pretest of Control Class and Experimental Class

The Mean Score and Standard Deviation of Students' Pretest in Control Class and Experimental Class in Reading Comprehension Test

Group	N	Mean	Std.Deviation	Std. Error Mean
Control	27	27.11	8.617	1.658
Experimental	28	25.14	9.419	1.780

Table above shows that the means score of the students' pretest of control class was 27.11 and standard deviation was 8.61, which are categorized as very poor classification and the means score of the students' pretest of experimental

class was 25.14 and standard deviation was 9.41 it was categorized as very poor classification. It means that the students' mean score between experiment class and control class was relative same. In this case, the experiment class and control class have the same prior knowledge before treatment.

The Means Score and Standard Deviation of Students' Posttest of Control Class and Experimental Class.

Group	N	Mean	Std. Deviation	Std. Error Mean
Control	27	62.37	14.391	2.769
Experimental	28	56.86	16.808	3.176

Table above shows that after treatment, the mean score of the students' posttest of control class was 62.37 and standard deviation was 14.4, which is categorized as Fair category, while the mean score of the students' posttest of experimental class was 56.86 and standard deviation was 16.8 which is categorized as fair classification. Furthermore, the score of students' learning vocabulary in posttest of the two groups a progress.

The T-value of Students' Pretest

Indicator	t-value	Df	Sig. (2 tailed)
Reading Comprehension	0.808	53	0.423

After calculating the students' score of the two classes before treatment (pre test) the researcher found that T-value values was 0.808 by probability sig (2 tailed) was 0.423 or the probability was greater than 0.05 as the level of significance for two tailed test, and the of freedom (df) 53 , so (0.423>0.05) .Furthermore, if the probability was greater than 0.05 it means that there is no a significant difference between the experimental class and control class or in other words, both of them were the same relative ability before treatment. The data of pretest indicated that the statistical hypothesis of H0 is accepted and statistical of H1 is rejected.

The t-value of students' posttest

Indicator	t-value	Df	Sig. (2 tailed)
Reading comprehension	7.30	53	0.02

After calculating the students' score of the posttest of the two classes the final result, the researcher found that the *t-value* was 7.30 with degree of freedom 53 and probability sig (2 tailed) was 0.02. From the degree of freedom it can be known the *t-table* of this research 2.000. Based on the data, the *t-value*(7.30)>*t-table*(2.000) and Sig. (2 tailed) is less than 0.05 as the level of significance (0.00 <

0.05). This means that there was a significant difference between experimental class and control class. On the other word, The result of post-test showed that the statistical hypothesis of H_0 was rejected and the statistical hypothesis of H_1 was accepted.

The students' interest

To know the students' interest toward the use of Cooperative Integrated Reading and Composition (CIRC) in teaching reading, the researcher distributed questionnaire to the students, after analyzing the data, the result show the use of Cooperative Integrated Reading and Composition (CIRC) could interest in learning reading .This is indicated by the percentage of the students' questionnaire shown in the following Table:

Interval	Categories	Frequency	Percentage (%)
85-100	Very high	0	0
69-84	High	25	92.6
52-68	Moderate	2	7.4
36-51	Low	0	0
0-35	Very low	0	0
Total		27	100

The result indicated that 25 (92.6%) students were "High", 2 (7.4%) students were "moderate", none "very high, Low and very low. It means that all of the students were interested in learning English by using Cooperative Integrated Reading and Composition (CIRC) . This is supported by following table:

The Mean Score of Students' Interest

N	Students' Score	Mean Score
27	1966	72.81

Table shows that the mean score of students' interest is 72.1 which means it is in high category according to the range of students' interest score. Therefore, the students are interested to the use of Cooperative Integrated Reading and Composition (CIRC) in teaching reading comprehension.

Conclusion

Based on the findings and discussion, the researcher puts forward the conclusion as follows:

- Using Cooperative Integrated Reading and Composition (CIRC) is effective to improve the students' Reading Comprehension, the second year students of SMK Negeri7 Bone in the Academic Year of 2018-2019.. It is proved by the mean score after they are taught from pre-test and post-test
- The students' mean score achievement in control class, was 27.11 in pre-test become 62.37 in post-test. In experimental class, was 25.4 in pre-test become 56.9 in post-test. This means the ability of the students both group was different after given treatments.
- The students were interested in learning English by using Cooperative Integrated Reading and Composition (CIRC) it is proved by the mean score of students' interest is 72.1 which means it is in positive category according to the range of students' interest score.

Suggestion

1. It is suggested that one of the Method of teaching Reading recommend is the use of Cooperative Integrated Reading Comprehension (CIRC), this technique can attract the students to read the test comprehensive.
2. It is suggested that the teacher should use varied interesting techniques in teaching English especially Reading Comprehension to motivate the students in learning English and make the students easier to understand the Text.
3. It is suggested that the teacher to know well how to implement the materials, how to create a good condition in the class and how to organize the class in order the students are not bored.

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